

श्रीफल प्रमेय

$$\frac{2^{31}}{(5)} = \frac{2^3}{5} = \frac{8}{5} = \textcircled{3} \text{ Ans}$$

$$\left. \frac{a^{n-1}}{n} \right\} \text{ Fermat's No.} = n-1$$

④

Concept-5

$$\frac{4^n}{6} \Rightarrow \text{शेष. (Rem.)} \Rightarrow \textcircled{4}$$

$$\frac{4^1}{6} = 4$$

$$\frac{4^2}{6} = 4$$

$$\frac{4^3}{6} = 4$$

$$\frac{4^{9869}}{6} = \textcircled{4} \text{ Ans}$$

Q $\frac{61284}{3} \div 5 = x$

$4^{96} \div 6 = y$

$\sqrt{2x+y} = ?$

$\sqrt{2+4}$

$\sqrt{6}$ Ans.

$\frac{61284}{3} \div 5 \rightarrow \text{F.N. } (4)$

शेष = (1) x

$\frac{4^{96}}{6} = (4) y$

$$\frac{31}{32} = \text{odd/विषम}$$

$$\frac{31}{32} = (-1)$$

$$\Rightarrow -1$$

$$32-1 = 31 \text{ Ans}$$

Concept-6 } Prime NO.
Special } अग्रान्य संख्या

$$\textcircled{\text{I}} \quad \frac{55555 \dots (16 \text{ बार})}{17} = \text{Rem.} = 0$$

$$\textcircled{\text{II}} \quad \frac{8888 \dots (22 \text{ बार})}{23} = \text{Rem.} = 0$$

$$\textcircled{\text{III}} \quad \frac{777 \dots (36 \text{ बार})}{37} = \text{शेष.} = 0$$

$$\frac{9999 \dots (14 \text{ गर})}{13} = \text{शेष./R} = ?$$

~~$$\begin{array}{r} 12 \text{ गर} \\ \hline 9 \dots 9 \end{array}$$~~

$$\frac{99}{13} = 8 \text{ Ans}$$

WINNERS



Maths by Aditya Patel Sir

$$\frac{8888 \dots (34 \text{ TR})}{17}$$

$$\begin{array}{r} 16 \\ \overline{8 \dots 8} \end{array}$$

$$\begin{array}{r} 16 \\ \overline{8 \dots 8} \end{array}$$

$$\frac{88}{17} = 3 \text{ Ans.}$$

16

$$\begin{array}{r} 7777 \dots\dots\dots (92 \text{ बार}) \\ \hline \quad \quad \quad (19) \end{array}$$

$$18 \times 5 = 90$$

$$\frac{77}{19} = ① \text{ Ans}$$

Special

odd / विषम

$$\frac{2}{6} = \text{शेष. (R)} \textcircled{2}$$

even / सम

$$\frac{2}{6} = \text{शेष (R)} = \textcircled{4}$$

$$\frac{2^1}{6} = 2$$

$$\frac{2^3}{6} = 2$$

$$\frac{2^5}{6} = 2$$

$$\frac{2^2}{6} = 4$$

$$\frac{2^4}{6} = 4$$

$$\frac{2^6}{6} = 4$$

$$\begin{array}{r}
 322 \\
 94 \\
 9686 \\
 \hline
 218 \\
 6
 \end{array} = \text{शेष. (R)}$$

$$\begin{array}{r}
 322 \\
 94 \\
 9686 \\
 \hline
 2 \\
 6
 \end{array}
 \begin{array}{l}
 \text{322} \\
 \text{94} \\
 \text{9686}
 \end{array}
 \begin{array}{l}
 \text{218} \\
 \text{even}
 \end{array} = \textcircled{4} \text{ Ans}$$

$$\begin{array}{r}
 1820 \\
 \hline
 6
 \end{array}$$

1819, 1821, 1824 are grouped together with a bracket.

odd / विषम

$$\frac{2}{6} \Rightarrow \textcircled{2} \text{ Ans}$$

$$\frac{20^1 + 20^2 + 20^3 + 20^4 + \dots + 20^{40}}{6} = 20(R)$$

$$\frac{\sqrt{2^1} + \sqrt{2^2} + 2^3 + 2^4 + \dots + 2^{39} + 2^{40}}{6}$$

$$\frac{\sqrt{2+4} + \sqrt{2+4} + \dots + \sqrt{2+4}}{6} = 0 \text{ Ans}$$